

REMARKS

Claims 15, 17-20, 22, 26-27, 30-39, 42, and 44-51 are currently pending in the application. By virtue of this amendment, claims 15, 17, and 26 have been amended and new claims 46-51 have been added.

Applicant notes with appreciation the indication by Examiner that claims 30-39, 41-42, and 44-45 are allowable over the prior art of record.

35 U.S.C. §112 Rejections

Claim 40 stands rejected under 35 U.S.C. §112, second paragraph as being indefinite or, in the alternative, under 35 U.S.C. §112, first paragraph as containing subject matter that was not adequately described in the specification. In response, Applicants have canceled claim 40. Reconsideration and withdrawal of the rejection of claim 40 under 35 U.S.C. §112, first paragraph or second paragraph, is respectfully requested.

Claims 15-22 and 25-28 stand rejected under 35 U.S.C. §112, first paragraph as containing subject matter which as not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention.

The Examiner asserts that the generic group of infrared radiation ablatable layers is not explicitly disclosed in the instant application. The Examiner interpreted the specification as meaning that the CO₂ laser ablation experiments did not meet the standard set forth in the specification that the photopolymer just beneath remain “without damage.”

Applicant respectfully disagrees. Applicants are submitting concurrently herein a Declaration of Rustom Kanga (hereinafter the “Decl. of Kanga”), one of the named inventors of the instant application. The Decl. of Kanga reports that the issue of the

unevenness of the plate surface in Example 3 is the subject of slight modification to laser power (§8). The Decl. of Kanga and its accompanying Exhibits C to G demonstrate that Dr. Kanga did in fact carry out these minor modifications to laser power and produced excellent results. Applicants respectfully submit that the experiments conducted by Dr. Kanga show that YAG and CO₂ lasers can be optimized and used to produce a photosensitive element without damaging the underlying photopolymerizable layer. Applicants respectfully submit that Example 3 does in fact demonstrate that YAG and CO₂ lasers are usable in the invention and that the attached Decl. of Kanga shows that slight modifications to laser power in the laser systems can produce excellent results without damage to the photopolymerizable layer.

The Examiner asserts that the generic grouping of opacity to non-infrared actinic radiation is not found in the original disclosure. In response, Applicants have deleted this element from the claims.

The Examiner also asserts that there is no disclosure made to photosensitive element without the presence of a dopant having a high extinction coefficient in the ultraviolet range. In response, as discussed above, Applicants have amended claim 15 to require the presence of an ultraviolet radiation absorbing material.

Finally, the Examiner asserts that the only support for a layer that could be ablatable by an infrared laser is Example 3, which is specific to a polyamide binder.

Applicant respectfully disagrees. As discussed in the attached Decl. of Kanga and in the original disclosure, the slip film layer is clearly disclosed as comprising a material selected from the group consisting of polyacetals, polyacrylics, polyimides, polybutylenes, polycarbonates, polyesters, polyethylenes, polyethylene ethers, and polyamides. The original 1993 disclosure, page 11, line 32 through page 12, lines 3, attached to the Decl. of Kanga as Exhibit A, describes the various materials that are usable in the slip film layers of the invention.

While Applicants acknowledge that Example 3 is directed to a slip film layer comprising polyamide, the disclosure clearly provides for the use of other materials in the slip film ablation layer. The application clearly discloses all of the claimed binders for use with lasers at a selected wavelength and power, including infrared lasers. The Decl. of Kanga clearly supports this conclusion.

Furthermore, the claims filed with the original disclosure of June 25, 1993 also provide support for the listing of binders set forth in the claims. See *In re Mott*, 190 U.S.P.Q. 536, 542 (CCPA 1976) ("Allowed claim 3, which was part of the application as originally filed and is thus available as original disclosure").

As is evidenced by Exhibit A to the Decl. of Kanga, originally filed claim 1, which form part of the original disclosure of the June 25, 1993 application, provides for:

Claim 1: A protective layer for a photocurable article comprising
a **polymeric matrix** and
a **dopant** having a high extinction coefficient in the spectral output range of 300 to 400 nm, the layer responding to a threshold dosage of radiation at a **selected wavelength** by photobleaching of the dopant and photoablation of the polymeric matrix.

Thus, the original disclosure did not limit the binder (polymeric matrix) to a polyamide. Originally filed claims 10 and 11 describe a method of making a **laser imaged printing plate** with the same polymeric matrix and dopant. Claim 10 specifically provides for **ablating the UV absorber using a laser**. Claim 10 does not limit the type and/or wavelength of the laser. Furthermore, claim 7 recites a list of compounds from which the polymeric matrix may be selected.

The Examiner further asserts that the instant claims are broader than the written disclosure and fail to include the essential element of the UV absorber.

In response, as discussed above, Applicants have amended independent claim 15 to require the presence of an ultraviolet radiation absorbing material in the ablation layer. Support for this amendment can be found in the specification, for example at page 8, lines 2-26. Thus, Applicants respectfully submit that independent claim 15 is now fully supported by the original disclosure and claims.

As discussed in the attached Decl. of Kanga, Example 3 clearly describes ablation imaging using lasers emitting in the IR range, specifically YAG and CO₂ lasers. This example clearly describes a photosensitive element comprising:

- (1) a photopolymerizable layer (page 18, line 30) – the commercially available KOR photopolymer used in Example 3 comprises 1,6-hexanediol diacrylate and 1,6-hexanediol dimethacrylate as the monomers;
- (2) a I.R. ablatable layer in direct contact with the photopolymerizable layer (page 15, lines 1-9 and page 18, line 31, through page 19, line 2) comprising:
 - (a) a UV absorbing material (page 15, line 9);
 - (b) a binder (i.e. Macromelt® 6900, a polyamide) (page 15, line 8);

wherein the I.R. ablatable layer is exposed to and ablated by an I.R. laser (i.e. a CO₂ laser).

Example 3 concludes with the following sentence:

“Thus, it was seen that the basic idea of the laser-imaged printing plate was demonstrated...”

In addition Table II (1993 patent application, page 20) clearly reports successful results. Although runs 2, 5 and 6 in Table II report that not enough ablation was achieved, the result achieved was workable and could easily be optimized by adjusting the power of the laser. Furthermore, runs 8 and 12 reported full ablation and, particularly run 12, a completely workable result. The attached Decl. of Kanga addresses the issue of the unevenness of the plate surface.

In his Declaration, Dr. Kanga reports that the issue of unevenness of the plate surface is the subject of mere slight modification to the laser power. Dr. Kanga was able to carry out the minor modifications to the laser power and produced excellent results.

35 U.S.C. §102(e)/35 U.S.C. §103(a) rejection

Claims 15-20 and 25-27 stand rejected under 35 U.S.C. §102(e) as being anticipated by, or in the alternative under 35 U.S.C. §103(a) as being unpatentable over Fan (6,238,837). The Examiner maintains that the only support for instant claims 15-20 and 25-27 in their current breadth is the date of submission of the amendment (August 13, 2001) and that Fan is thus available as prior art where support was not found in the application as filed.

In response, as discussed above, Applicants have amended claim 15 to require the presence of an ultraviolet radiation absorbing material in the ablation layer. Support for this change can be found in the specification, for example at page 8, lines 2-26. Support for the various binders that are usable in the ablation layer can be found in the specification, for example at page 11, lines 3-9 (original 1993 disclosure page 11, line 32 through page 12, line 3). In addition, the attached Decl. of Kanga clearly demonstrates that these binders are usable in compositions of the invention.

Accordingly, Applicants respectfully submit that all of the elements of independent claim 15 are supported by the specification, having an effective filing date of June 25, 1993 and that the Fan patent is therefore not available as prior art against the

instant invention. Reconsideration and withdrawal of the rejection of claims 15-20 and 25-27 under 35 U.S.C. §102(e) and/or under 35 U.S.C. §103(a) over Fan (6,238,837) is respectfully requested.

Insufficiency of Murphy Declaration

The Examiner maintains that the Declaration of Edward T. Murphy (hereinafter the "Decl. of Murphy") is insufficient to overcome the rejection of claims 15-22, 25-28, 30-42, 44, and 45. However, the Examiner notes that the declarations with respect to claims 30-39, 41-42, and 45 are moot. The Examiner maintained her rejection because in Examiner's opinion, Mr. Murphy failed to provide sufficient facts to support his opinion that the copy of claims presented to him were described in the June 1993 patent application and that its inventors invented and thus had possession of the claimed subject matter.

In response, Applicants are submitting concurrently herein the Decl. of Kanga with accompanying Exhibits A-G that clearly demonstrates that Applicants had possession of the claimed subject matter at least as early as the June 1993 filing date of the parent application. Dr. Kanga is one of the co-inventors of the instant application and as such is a person skilled in the art. Attached Exhibits C-G contain laboratory notebook pages to provide sufficient facts to show that the claims are fully supported by the June 1993 patent application.

First, the Examiner disagreed with Mr. Murphy's interpretation of page 14, lines 18-20, wherein he Mr. Murphy asserted that the plate is usable as a printing surface (even if the ablation does damage the photopolymer just beneath). The Examiner maintained that this addition to the disclosure is opinion as to what is meant by "without damage to the photopolymer just beneath." The Examiner interpreted the words of pages 19-20 (Example 3) to mean that the sealed CO₂ laser ablation experiments did not meet the standard of page 14 that the photopolymer just beneath remain "without damage." The

Examiner's position in this regard is her opinion, without support. This cannot stand in view of the declarations submitted.

In response, Applicants submitted herein the Decl. of Kanga, in support of features of the claimed invention. As reported in the Decl. of Kanga, Table II (1993 patent application, page 20) reports successful results. Although runs 2, 5 and 6 in Table II report that not enough ablation was achieved, the result achieved was workable and could easily be optimized by adjusting the power of the laser. Further runs 8 and 12 reported full ablation and, particularly run 12, a completely workable result. The issue of unevenness of the plate surface is the subject of mere slight modification to the laser power.

Dr. Kanga did in fact carry out the minor modifications to the laser power and produced excellent results as described in Exhibits C to G. Further, with minor modifications to the power of the YAG laser, excellent results were also achieved as noted in the above-described Exhibits.

Second, the Examiner disagreed with Mr. Murphy's assertion that as one of skill in the art that the 1993 application experiments indicate a preference for IR lasers as well as UV lasers. The Examiner also believed that the IR laser systems in Example 3 do not meet the requirement of page 14 of the 1993 application, i.e., the wavelength and power should be such that the laser treatment can ablate the slip film without damage to the photopolymer just beneath, finding that this standard is much higher than that the imaged plate can be used as a printing plate. The Examiner believed Mr. Murphy's allegation that the IR laser is preferred in view of the 1993 application to be in error.

As discussed in the attached Decl. of Kanga, the June 1993 patent application indicates, for example, at page 14, lines 15 to 20, that the wavelength of the laser used for ablation must be such that the laser treatment ablates the ablatable layer without extensively damaging the photopolymer to an extent that it cannot subsequently be used

as a printing surface. In addition, Applicants believe that the Decl. of Kanga and its accompanying Exhibits demonstrates that unevenness of the plate surface is the subject of slight modification to laser power. As noted in his Declaration and accompanying Exhibits, Dr. Kanga carried out the minor modifications to laser power and produced excellent results.

Third, the Examiner maintains that Mr. Murphy does not offer any outside evidence other than his statement that workers in the art in 1993 would have recognized that the YAG laser reported as “essentially noneffective” would ablate the slip layer as designed by applicants of the 1993 application because there is no other evidence given to overcome this direct statement. The Examiner does not believe that Mr. Murphy’s allegation is sufficient to overcome the non-working example disclosed without further facts to support his statement.

In response, Applicants have submitted the Decl. of Kanga and accompanying Exhibits C through G, which Applicants believe addresses the issues raised by the Examiner. As one of the co-inventors of the instant application, Dr. Kanga is clearly a person of skill in the art. Furthermore, Exhibits C through G contain laboratory notebook pages detailing experiments performed as a basis for the patent of the instant invention. Applicants respectfully submit that the Decl. of Kanga and its accompanying Exhibits is sufficient to demonstrate that workers skilled in the art in 1993 would have recognized that infrared lasers, including YAG and CO₂ lasers would be usable to ablate the slip film layer of Applicants’ invention.

Fourth, the Examiner maintains that Mr. Murphy does not address the issue of photopolymerizable layers being other than UV polymerizable or whether the UV absorber would be recognized by workers of skill in the art to be necessary or not. The Examiner maintains that there is no evidence given to remove the issue of missing limitations to UV absorbers and UV imageable photopolymerizable layers.

In response, as discussed above, Applicants have amended independent claim 15 to require the presence of an ultraviolet radiation absorber.

35 U.S.C. §103 Rejection

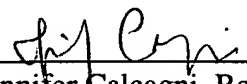
Claims 15 and 16 stand rejected under 35 U.S.C. §103 as being unpatentable over Scott Paper Company in view of the Murphy Declaration and further in view of Law et al. In view of the amended claims, the Applicant believes that this rejection has been mooted.

Conclusion

Applicant believes that the foregoing is a complete response to all of the objections and rejections raised by the Examiner and that the claims of the instant application are now in condition for allowance. Accordingly, an indication of allowability and an early Notice of Allowance is respectfully requested.

If the Examiner feels that a telephonic interview would be helpful, she is requested to contact the undersigned at (203) 575-2648.

Respectfully Submitted,



Jennifer Calcagni, Reg. No. 50,207
Carmody & Torrance, LLP
50 Leavenworth Street
Waterbury, CT. 06721-1110
(203) 575-2648